ABSTRACT OF THE DISCLOSURE

A method of operating a computer system includes providing a first version of a program in memory and verifying the program prior to program execution. The first version of a

5 program includes at least one program unit. Each program unit includes an Application Programming Interface (API) definition file and an implementation, each API definition file defines items in its associated program unit that are made accessible to one or more other program units and each implementation includes executable code corresponding to the API definition file. The executable code includes type specific instructions and data.

10 Program verification includes indicating a verification error when a first version of a first program unit implementation is not internally consistent, indicating a verification error when the first version of the first program unit implementation is inconsistent with the version of the program unit API definition file associated with the first version of the first program unit implementation, receiving a second version of the first program unit

15 implementation and a second version of the first program unit API definition file, verifying the second version of the first program unit implementation and verifying that the second version of the first program unit implementation is binary compatible with the first version of the first program unit implementation by comparing the first version of the first program unit API definition file and the second version of the first program unit API

20 definition file.

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